

Amendments to the Specification:

Please insert the following paragraph on page 1 after the title:

CROSS REFERENCE TO RELATED APPLICATION

The present application is a national stage application of PCT/EP99/09140, filed November 25, 1999.

Please replace the first paragraph on page 1 with the following amended paragraph:

BACKGROUND OF THE INVENTION

(Field of the Invention)

The invention concerns a process for producing a corrosion- and wear-resistant layer on a substrate by spraying on an iron oxide-based material. The invention further concerns a material for producing a corrosion- and wear-resistant layer on a substrate which is applied by thermal spraying with that process.

Please replace the second paragraph on page 1 with the following amended paragraph:

(2) Description of the Related Art

DE 30 48 691 A1 discloses a process of that kind, with which a piercer bar for a piercing and drawing mill is coated; a protective layer is formed on the bar surface by spraying on in a molten state a powder which extensively consists of iron oxide; the aim is that such a piercing bar can be inexpensively produced and is to be of excellent durability and is to afford better insulating and sliding properties. For that purpose, the iron oxides involved are the compounds FeO, Fe₃O₄ and Fe₂O₃ or mixtures thereof, which make up more than 50% by weight of the

powder. It is also possible to use oxides of chromium, nickel, copper and manganese or metals from the group consisting of iron, chromium, nickel, cobalt, copper and manganese.

Please replace the first paragraph on page 3 with the following amended paragraph:

SUMMARY OF THE INVENTION

In consideration of those factors, the inventor set himself the object of improving the production of a constant, wear- and corrosion-resistant surface coating on an oxide base, by means of thermal spraying.

Please delete the second and third full paragraphs on page 3c.

Please delete the fourth paragraph on page 3c.

Please delete page 4 in its entirety.

Please delete the first paragraph on page 5.

Please replace the second paragraph on page 5 with the following amended paragraph:

BRIEF DESCRIPTION OF THE DRAWINGS

Further advantages, features and details of the invention will be apparent from the description hereinafter of preferred embodiments and with reference to the diagrammatic drawings in which:

Please replace the eleventh paragraph bridging pages 5-6 with the following amended paragraph:

DETAILED DESCRIPTION

For the purposes of applying wear and/or corrosion layers, it is possible to use all thermal spraying processes such as autogeneous flame spraying, high velocity flame spraying (HVOF), plasma spraying in air (APS), so-called shroud plasma spraying (SPS), plasma spraying in vacuum (LPPS), high-power plasma spraying (HPPS), autogenous or arc wire spraying. On-line monitoring and control is effected by a combination of various processes which make it possible to measure the temperature of the particle or the degree of melting, the particle size, the speed, the impact thereof against the substrate and the rise in temperature of the layer and the substrate during the spraying operation. The measurement signals are then fed to the computer of the control portion of the thermal spraying installation in order to be able to adapt the flame parameters and the power to the measured values.